



MIAMI BEACH

OFFICE OF THE CITY MANAGER

NO. LTC # **323-2016**

LETTER TO COMMISSION

TO: Mayor Philip Levine and Members of the City Commission

FROM: Jimmy L. Morales, City Manager

DATE: August 2, 2016

SUBJECT: **ZIKA VIRUS – WHAT YOU NEED TO KNOW**

In light of recent developments regarding mosquitoes and potential transmittal of the Zika virus, the City of Miami Beach would like to make the following information available to its constituents in efforts to stimulate awareness of the Zika virus and the mosquito that is known to be able to carry the virus. The attached flyer from the Center for Disease Control (CDC) details the life cycle of the mosquito. We provide this to enlist the assistance of the community to help remove standing water that has been in place for more than a few days and could lead to breeding of mosquitoes. Based upon the information from the CDC, it takes approximately 7-10 days for a mosquito egg to become an adult mosquito. By reducing the population of mosquitoes it could slow the transmission of the virus.

Common Zika virus symptoms include: fever, rash, joint pain and conjunctivitis (red eyes). Other symptoms include: muscle pain and headache. Symptoms can last for several days to a week, and will rarely require hospitalization. However, scientific studies have shown that pregnant women are most vulnerable to this virus and may potentially cause birth defects if infected.

Miami Beach is continuing its efforts to remove standing water throughout the City with weekly sweeps and modified operating procedures. Constituents are encouraged to look for and to remove standing water from their properties as well as to report any water that has been standing for more than 48 hours via the eGov App or by calling our Public Works Department at 305-673-7625. Additional information on the Zika virus can be found at: www.cdc.gov/zika.

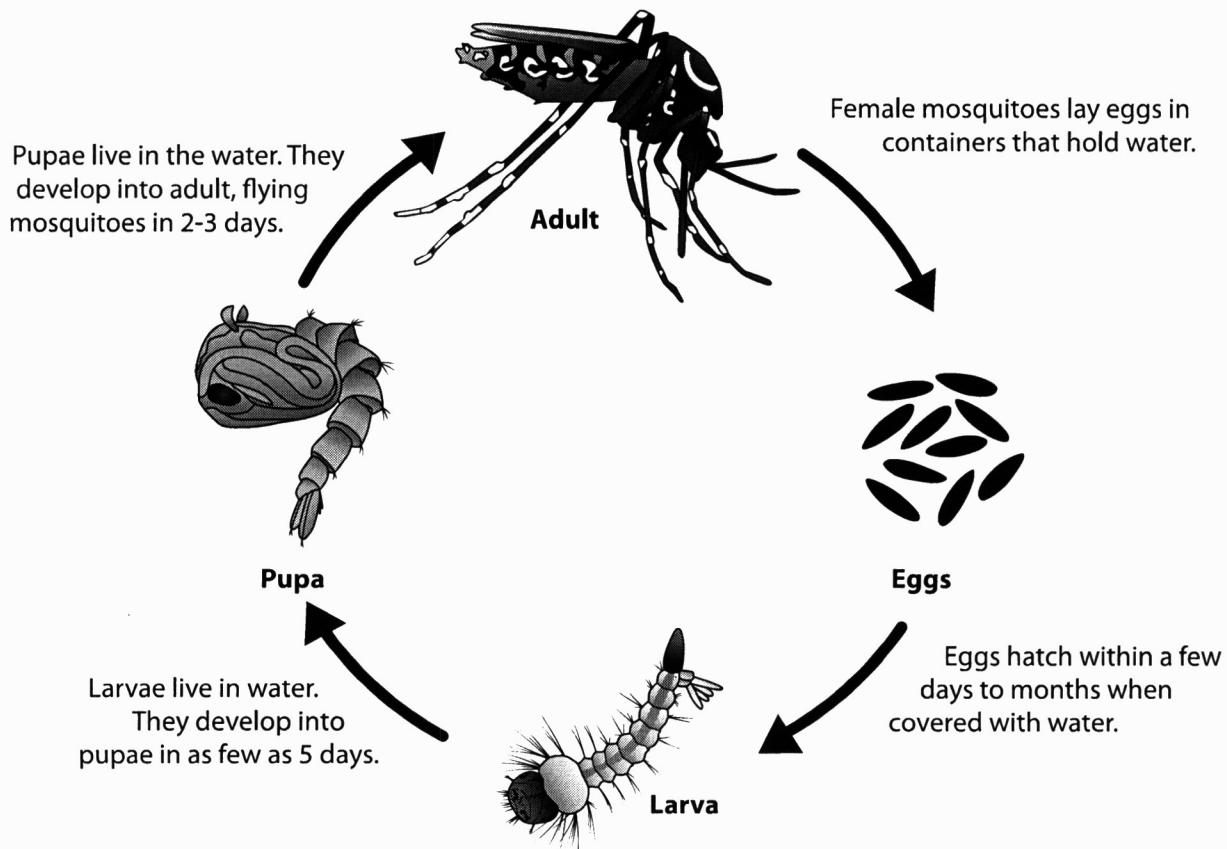
Attachment: Mosquito Life Cycle Flyer (English and Spanish)

JLM/ETC/FRS

Mosquito life cycle

Aedes aegypti

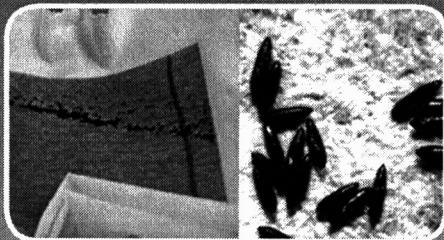
It takes about 7-10 days for an egg to develop into an adult mosquito.



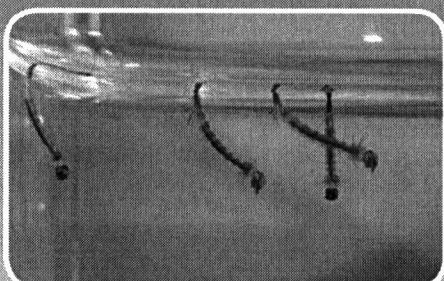
Life stages of *Aedes aegypti* and *Aedes albopictus* mosquitoes

Eggs

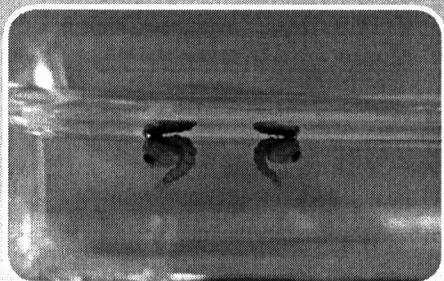
- Adult, female mosquitoes lay eggs on the inner, wet walls of containers with water, above the waterline.
- Eggs stick to container walls like glue. They can survive drying out for up to 8 months. Mosquito eggs can even survive a winter in the southern United States.
- Mosquitoes only need a small amount of water to lay eggs. Bowls, cups, fountains, tires, barrels, vases, and any other container storing water make a great "nursery."



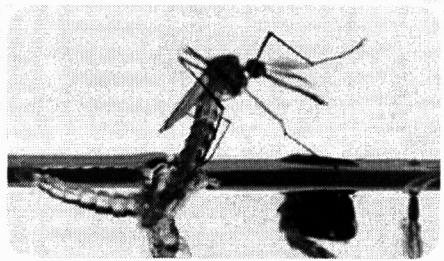
Eggs look like black dirt.



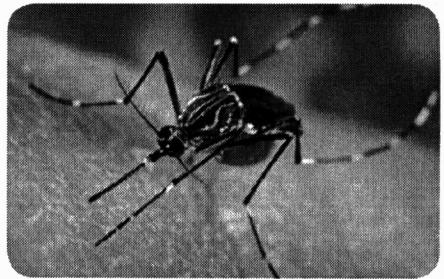
Larvae in the water.



Pupae in the water.



An adult mosquito emerges from a pupae.



An adult mosquito bites a person.

Larva

- Larvae live in the water. They emerge from mosquito eggs. This happens when water (from rain or a sprinkler) covers the eggs.
- Larvae can be seen in the water. They are very active and are often called "wrigglers."

Pupa

- Pupae live in the water. An adult mosquito emerges from the pupa and flies away.

Adult

- Adult female mosquitoes bite people and animals. Mosquitoes need blood to produce eggs.
- After feeding, female mosquitoes look for water sources to lay eggs.
- *Aedes aegypti* and *Aedes albopictus* don't fly long distances. In its lifetime, a mosquito will only fly within a few blocks.
- *Aedes aegypti* mosquitoes prefer to live near and bite people.
- Because *Aedes albopictus* bite people and animals, they can live near homes or in neighboring woods.
- Mosquitoes live inside and outside.

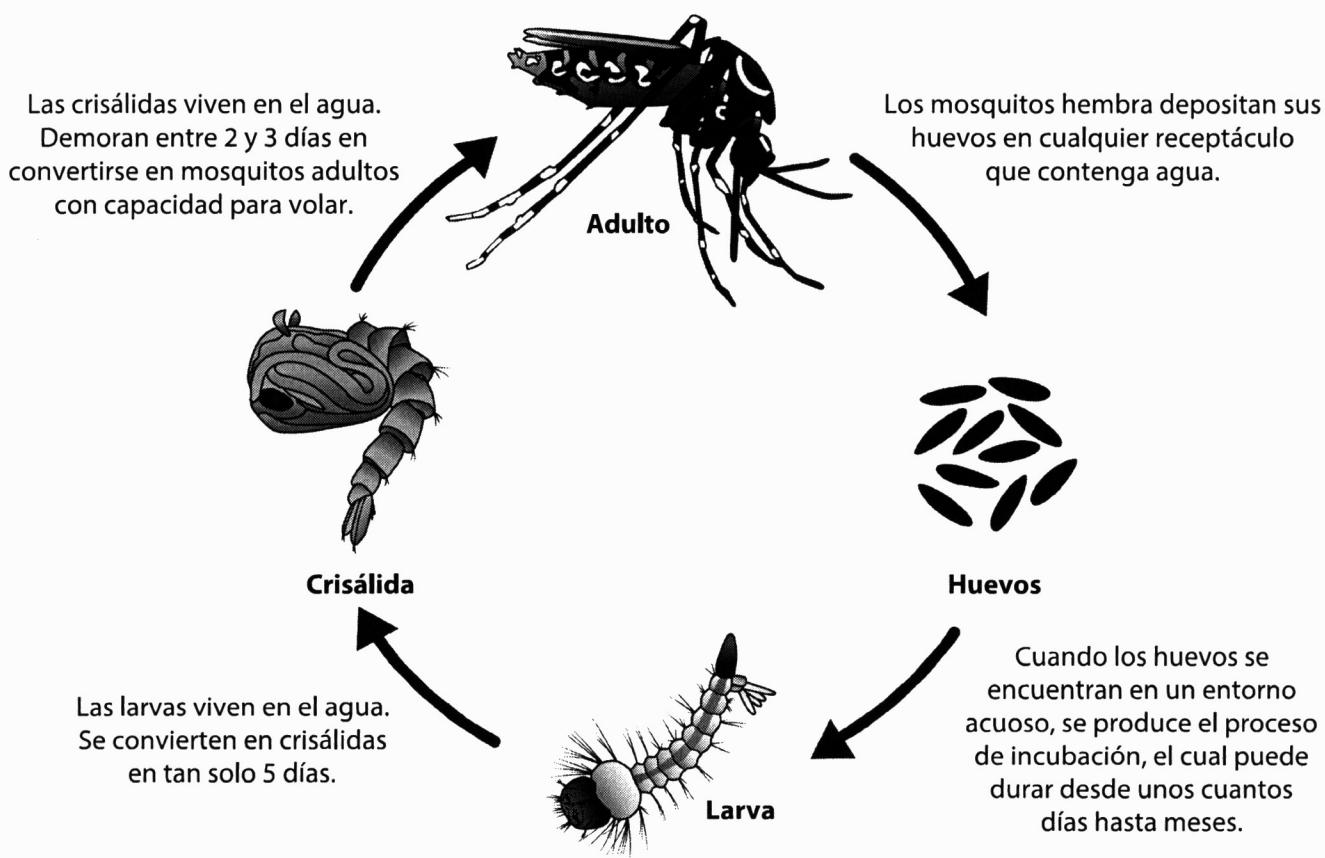
For more information on diseases spread by mosquitoes:

- www.cdc.gov/chikungunya
- www.cdc.gov/dengue
- www.cdc.gov/Zika

Ciclo de vida del mosquito

Aedes aegypti

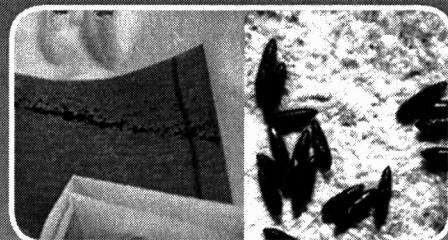
Un huevo demora entre 7 y 10 días en convertirse en un mosquito adulto.



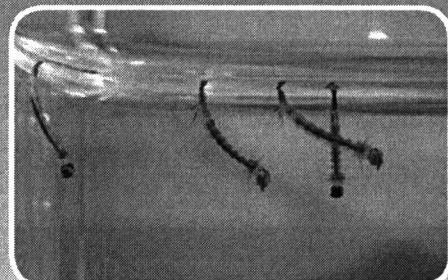
Etapas del ciclo de vida de los mosquitos *Aedes aegypti* y *Aedes albopictus*

Huevos

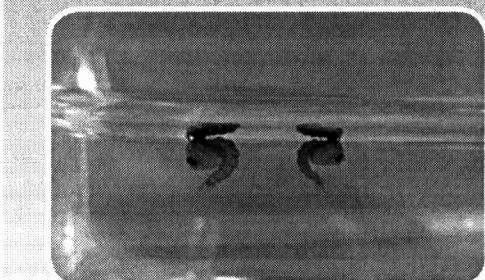
- Los mosquitos hembra adultos depositan sus huevos sobre las paredes internas de recipientes con agua, las cuales están húmedas, del nivel de agua hacia arriba.
- Los huevos se adhieren a las paredes de los recipientes como si tuvieran pegamento. Pueden sobrevivir sin estar dentro del agua por un período de hasta 8 meses. Los huevos de mosquito pueden incluso sobrevivir un invierno en la zona sur de Estados Unidos.
- Los mosquitos solo necesitan una pequeña cantidad de agua para depositar sus huevos. De manera que los tazones, las tazas, las fuentes, los neumáticos, los barriles, los floreros y demás recipientes que contengan agua son una fabulosa "incubadora".



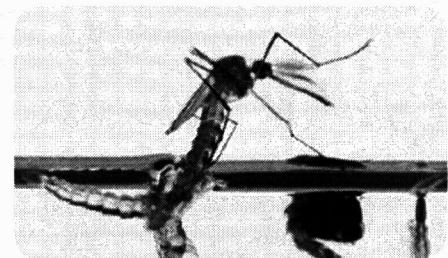
Los huevos tienen el aspecto de algo sucio negruzco.



Larvas en el agua.



Crisálidas en el agua.



Un mosquito adulto sale de una crisálida.



Un mosquito adulto pica a una persona.

Larva

- Las larvas viven en el agua. Salen de los huevos de mosquito. Este proceso tiene lugar cuando los huevos quedan cubiertos por agua (de la lluvia o de un rociador).
- Las larvas pueden verse en el agua. Son sumamente activas, por lo que a veces se las llama "saltarinas".

Crisálida

- Las crisálidas viven en el agua. De la crisálida sale el mosquito adulto, el cual se desplaza volando hacia diversos lugares.

Adulto

- Los mosquitos hembra adultos pican a personas y animales. Los mosquitos necesitan sangre para poner huevos.
- Despues de alimentarse, los mosquitos hembra buscan entornos acuosos para depositar sus huevos.
- Los mosquitos *Aedes aegypti* y *Aedes albopictus* no vuelan largas distancias. En toda su vida, un mosquito vuela una distancia equivalente a unas pocas cuadras.
- Los mosquitos *Aedes aegypti* prefieren vivir cerca de las personas y picarlas.
- Debido a que los mosquitos *Aedes albopictus* pican a personas y animales, pueden vivir cerca de viviendas o en las áreas agrestes cercanas.
- Los mosquitos viven en ambientes internos y al aire libre.

Para obtener mayor información sobre enfermedades transmitidas por mosquitos, visite:

- www.cdc.gov/chikungunya
- www.cdc.gov/dengue
- www.cdc.gov/Zika